

REMARKS

1. Status of Pending Claims

The present application contains claims 1-49, of which claims 40-49 are new. Claims 33-39 are allowed. Claims 21 and 33 are objected to. Claims 1-20 and 22-32 are rejected. Each of the rejections is traversed and Applicant will address each of the rejections in the following.

2. Amendment of "Objected to" Claims

Claim 21 is objected to as being dependent upon a rejected base claim, but was indicated as otherwise allowable if rewritten in independent form, including all of the limitations of the base claim and intervening claims. Via the present amendment, claim 22 now incorporates all limitations of independent claim 16, from which it initially depended.

Claim 33 is objected to because of the following informality highlighted in the Office Action: "Re claim 33, lines 7-8: Replace 'via the first RF interface.' with -via the first RF interface;--." Claim 33 is amended to correct the highlighted defect. Claim 33 is also amended to fix a typographical error. Applicant submits that these changes do not present new matter.

3. Response to the Grounds for Rejection of Claims 1-20 and 22-32

Claims 1, 2, 7-9, 11-17, 22-25, 27, and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,457,307 (hereinafter Dumont '307) in view of U.S. Patent No. 5,992,570 (hereinafter Walter '570). Claims 3-6, 18, 19, 26, and 28-30 are rejected under 35, U.S.C. 103(a) as being unpatentable over Dumont '307 as modified by Walter '570, and further in view of U.S. Patent No. 5,640,002 (hereinafter Ruppert '002). Claims 10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dumont '307, as modified by Walter '570, and further in view of U.S. Patent No. 6,092,725 (hereinafter Swartz '725). In each instance, Dumont '307 serves as the primary reference.

A. A Prima Facie Case of Obviousness Has Not Been Established

Because the Proffered Motivation to Combine the Cited Prior Art References Does Not Meet the Legal Standard

Each basis for rejecting claims 1-20 and 22-32 in the Office Action relies upon a combination of prior art that includes Dumont '307 and Walter '570. Claims 1, 2, 7-9, 11-17,

22-25, 27, and 31-32 are rejected based solely on these two references. To reject the remaining claims, Dumont '307 and Walter '570 are combined with Ruppert '002 (for claims 3-6, 18, 19, 26, and 28-30) and with Swartz '725 (for claims 10 and 20). Because Dumont '307 and Walter '570 cannot be combined to establish a prima facie case of obviousness, as discussed in detail below, each proposed combination of prior art that includes these references (hence, every combination relied upon in the Office Action) is insufficient to establish an obviousness rejection. Accordingly, Applicant respectfully traverses each of the proffered grounds for rejection as failing to establish a prima facie case of obviousness.

Independent claims 1, 8, 16, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable solely over Dumont '307 in view of Walter '570. The Office Action stated that "Dumont fails to teach that the checkout station is a customer operated automated payment accepting subsystem... Walter et al. Teaches such a self-checkout station with a customer operated automated payment-accepting subsystem through FIG.1." Office Action p.5. The Office Action then states that it would have been obvious to combine the teachings of Dumont '307 with those of Walter '570 because one of ordinary skill in the art "would have been motivated to do this in order to have a more efficient means of shopping by reducing the amount of time needed to stand in line while also reducing the amount of employees needed for checking out[,] contributing to a more enjoyable and customizable/personal shopping experience...." Office Action p.9. Such a justification does not comply with the legal standards set forth for establishing a prima facie case of obviousness. "The examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness." MPEP § 2142.

The MPEP and pertinent case law set out "three basic criteria" that must be met in order to establish a prima facie case of obviousness:

First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teachings or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure.

In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); MPEP § 2142.

1. There is No Suggestion or Motivation for Modification in the Cited Prior Art

The Office Action has not met the basic requirements of a prima facie case. The motivation set forth in the Office Action to justify combining the references, namely “to have a more efficient means of shopping by reducing the amount of time needed to stand in line while also reducing the amount of employees needed for checking out[,] contributing to a more enjoyable and customizable/personal shopping experience...” is not found in the prior art. The benefits suggested in the Office Action originate via impermissible hindsight from Applicant’s disclosure. Applicant’s specification teaches that “by combining portable customer-operated barcode reading with a cashier-less payment system, the time wasted by customers waiting in checkout queues may be eliminated or reduced.” Page 21, lines 18-21. Applicant’s specification also teaches that “Adding self-checkout stations to conventional checkout stations can reduce checkout queue times without requiring additional manpower....” Page 2, lines 12-14. Thus, the Office Action has not satisfied the burden of showing that the “teaching or suggestion to make the claimed combination...[is] found in the prior art....” MPEP § 2143. In attempting to establish a prima facie case of obviousness, “impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.” MPEP § 2142. Furthermore, each prior art reference “must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention.” *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983); MPEP § 2141.03 (emphasis in original).

In the case at hand, Dumont ‘307, the primary support relied upon in the obviousness rejection of independent claims 1, 8, 16, and 25, actually teaches away from the proposed combination. A key aspect of the system taught by Dumont ‘307 is the use of a store employee at a “purchase confirmation station of the device located at store’s checkout station.” Col. 3, Lines 54-55. The “purchase confirmation station is adapted to enable an employee of the store to quickly verify that all items represented by the shopper as purchase items are in fact purchase items.” *Id.* Thus, the system taught by Dumont ‘307 “necessitates that the store clerk provide a cursory, rapid verification of all items as they are quickly transferred from a user’s shopping cart to a bagging area.” Col. 4, Lines 17-20. Dumont ‘307 requires physically staffing an employee at each checkout station, and it provides no suggestion or disclosure to operate without an employee present. Furthermore, the employee must still verify “all items” purchased by the shopper. Thus, Dumont ‘307 maintains the potential to result in delays or long queues for shoppers. On the other hand, Applicant’s claim 1, for example, claims a method that includes a “portable data reading unit” and a “self-checkout station” having a “customer-operated automated payment-accepting subsystem.”

The method of claim 1 can eliminate the need for staffing an employee at each checkout station. Similar arguments can also be made with respect to portable unit/terminal and the “self-checkout station” of claims 8, 16, and 25.

The Office Action correctly states that “Dumont fails to teach that the checkout station is a customer operated automated payment accepting subsystem.” Office Action p.5. However, the Office Action is in error by stating that Dumont ‘307 can be modified by Walter ‘570 to establish a prima facie case of obviousness against the rejected independent claims. Although Walter ‘570 does disclose a “self-service checkout apparatus,” the concept of a self-service checkout apparatus is fundamentally incompatible with the teachings of Dumont ‘307. Dumont ‘307 explicitly teaches that the presence and active participation of a store employee is a vital aspect of the disclosed system. As stated in Dumont ‘307, the “verification that all items purported to be purchase items are in fact purchase items is performed solely by an employee of the store...” Col. 8, Lines 23-26 (emphasis added).

As further evidence of the requirement for a store employee at the checkout station, Dumont ‘307 teaches applying a physical or visible “designation” to each purchase item to indicate that the item was, in fact, selected for purchase with the portable scanner. The portable scanner disclosed in Dumont ‘307 employs an internal roller component that “includes purchase designation means thereon which are specifically adapted to selectively designate the select item over which the distal front face of the handset passes, as a purchase item which can be easily identified as such at a checkout station.” Col. 5, Lines 38-42. Disclosed examples of the “designation” mark include “time-active ink”; see Abstract; as well as “a green ink stamping strip”; Col. 7 Lines 16-52. Dumont ‘307 requires the presence of an employee to verify the existence of the designation mark. Attempting to modify Dumont ‘307 to incorporate a self-checkout system would entirely contradict the stated principles of operation that the reference discloses.

“If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious.” MPEP § 2143.01 (citing *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)). Furthermore “If the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.” MPEP § 2141.03 (citing *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)). Because Dumont ‘307 cannot be modified to incorporate a self-checkout station

and still remain consistent with its principles of operation, the modification proposed in the Office Action is improper.

One of ordinary skill in the art would also be dissuaded from using Walter '570 to modify Dumont '307 because Walter '570 acknowledges the existence of portable terminals and teaches away from their use. Walter '570 adopts a standard product selection system in which "a customer will approach the counter with merchandise to be purchased held in a conventional shopping trolley or cart." Col. 5, Lines 45-47. In bolstering its adoption of a standard product-selection system, the background disclosure of Walter '570 teaches away from adopting a system that would use a "portable data terminal." According to Walter '570, such a system would have "the disadvantage of having to provide a data terminal for each cart." Col. 1, Lines 43-55. Accordingly, the prior art cited against Applicant's rejected independent claims offers no suggestion or motivation to modify the primary reference, Dumont '307, in the manner indicated in the Office Action.

2. The Office Action Presents No Alternative Source of the Alleged Motivation to Modify the Cited Primary Reference

In addition to not presenting a legally sufficient showing of any suggestion or motivation found in the prior art to modify the primary reference as suggested by the Office Action, no other source was proffered for the proposed motivation to modify the reference. The Office Action likewise did not offer any showing that the proposed modification would be found in the knowledge generally available to those skilled in the art. In order to establish a prima facie case of obviousness, the rejection is required to make, and provide specific, objective evidence of, the principle or specific understanding within the knowledge of a skilled artisan that would have motivated the skilled artisan to make the claimed inventions. *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999). As evidence of the motivation, the present Office Action only states broad, unsupported expected benefits of the proposed combination of references – benefits that are taught by the Applicant's specification and adopted in the Office Action via impermissible hindsight. Such a showing does not meet the required burden to establish a prima facie case of obviousness.

In order to allege a method or system that purportedly contains every element of the rejected independent claims, each ground for rejection in the Office Action relies upon the improper combination of the Dumont '307 and Walter '570. For the reasons stated above, the proposed combination is improper, and, accordingly, the Office Action has not established a prima facie case of obviousness against independent claims 1, 8, 16, and 25.

Absent a proper rejection to the patentability of these claims, Applicant believes each independent claim is in a position for allowance.

The MPEP and applicable case law also provide that “If an independent claim is nonobvious under 35 U.S.C. § 103, then any claim depending therefrom is nonobvious.” MPEP § 2143.03 (citing *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)). Accordingly, because the prior art relied upon in the Office Action is insufficient for establishing a valid obviousness rejection against independent claims 1, 8, 16, and 25, dependent claims 2-7, 9-15, 17-20 and 22-24, and 26-32 are also deemed nonobvious for this reason alone. However, the dependent claims are also deemed patentable because the Office Action offers no valid grounds for their rejection. The rejection of each dependent claim is predicated, at least in part, upon the improper combination of Dumont ‘307 and Walter ‘570. The Office Action’s citation of additional elements allegedly found in Rupert ‘002 and Swartz ‘725 does not rectify the fact that the primary references cannot be properly combined. As such, the Office Action fails to establish a prima facie case with respect to any of the dependent claims.


Additionally, Applicant asserts that the motivations offered in the Office Action to support the modification of Dumont ‘307 and Walter ‘570 with Rupert ‘002 and with Swartz ‘725 are equally invalid due to legal deficiencies similar to those discussed above. In particular, the Office Action erroneously lists generally beneficial goals as motivation for the proposed modification without providing the requisite showing that there is “some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.” *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); MPEP § 2142. The Office Action also failed to provide any objective evidence, in the prior art or otherwise, that there would be a “reasonable expectation of success” that if the proposed modifications were made, the supposed benefits stated in the Office Action would result. *Id.* Without making a sufficient showing, a prima facie case of obviousness is not established. However, because each dependent claim includes one or more limitations defining an aspect of the invention in addition to those set out in the base claim or any intervening claim from which they depend, individual reconsideration of the patentability of each dependent claim is respectfully requested in light of Applicant’s response.

B. Other Claims Amended Via the Present Amendment

In addition to reasserting the patentability of the prior pending claims, Applicant adds dependent claims 40-49 via the present amendment. Applicant submits that claims 40-49 additionally present patentable subject matter. Claims 40-42, 44-46, and 49 relate to store security and confirmation of item selection. It is submitted that these claims are supported by the application as originally filed and add no new matter. Claims 43, 47, and 48 specify that the self-checkout station can have, or can use, an interface to input price information for the identified items from a separate controller. These claims present subject matter similar to that presented in pending claim 21. Claim 4 is similarly amended to clarify the nature of the POS controller output and input signals. As amended, claim 4 indicates that the self-checkout station outputs the signal to the POS controller and receives the inputted price data from the POS controller. It is submitted that amended claim 4 is supported by the application as originally filed and adds no new matter.

Applicant submits that pending claims 1-49 are in a position for allowance, and Applicant respectfully requests the same. In the event that any of claims remain rejected in light of the present amendment, Applicant respectfully requests that the Examiner provide a new non-final Office Action affording Applicant an opportunity to address the issues raised. The Examiner is also encouraged to contact Applicant's undersigned attorney via telephone at the number listed below to discuss any issues that remain.

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

4. (Amended) The method of claim 1, wherein the step of determining the a price total comprises the steps of:
outputting signals from the self-checkout station to a POS controller through an interface that formats the signals to mimic in a format that mimics signals outputted by conventional POS scanning terminals after performing a check-out scan for each of the plurality of items; and inputting, to the self-checkout station, price information generated by the POS controller in response to the signals outputted in the outputting step.

21. (Amended) ~~The self-checkout station of claim 16, further comprising~~ A self-checkout station comprising:

a data input port that inputs a plurality of data records from a portable data storage unit;

a first controller that determines a price for a plurality of items corresponding to the plurality of data records inputted via the data input port;

a non-portable customer-operated automated payment-acceptor that generates an output signal based on an amount of tendered payment; and

a an interface with a second controller, wherein the first controller determines the price for the plurality of items by outputting signals to the second controller via the interface and inputting price information from the second controller via the interface;

wherein at least one of the first controller and the automated payment-acceptor generates an indication when a tendered payment is sufficient to pay the price determined by the first controller.

33. (Amended) A customer-operated self-checkout system for items bearing identifiers, the system comprising:

a portable terminal including a data reader and a first RF interface, wherein the portable terminal identifies selected items using the data reader, and transmits information about the selected items via the first RF interface;

a base station including ~~an~~ a second RF interface, a memory, and a data output port, wherein the base station receives the information about the selected items from the portable terminal via the second RF interface, stores the information in the memory, and outputs the information via the data output port; and

a self-checkout station including a data input port and a customer-operated automated payment-accepting subsystem, wherein the self-checkout station receives the stored information from the base station data output port via the data input port, and accepts payment from the customer for the selected items using the payment-accepting subsystem.

40. (New) The method of claim 4, wherein the plurality of data records includes physical characteristic data for each of the plurality of items, and further comprising the steps of:

calculating an expected aggregate physical characteristic for the plurality of items based on the plurality of data records;

automatically measuring an actual aggregate physical characteristic for the plurality of items; and

verifying that the measured aggregate substantially equates with the expected aggregate.

41. (New) The method of claim 40 wherein the physical characteristic is weight.

42. (New) The method of claim 40 wherein the physical characteristic is volume.

43. (New) The method of claim 8 further comprising the step of determining a price total at the self-checkout station by:

outputting signals from the self-checkout station to a POS controller through an interface that formats the signals to mimic signals outputted by conventional POS scanning terminals after performing a check-out scan for each of the plurality of items; and

inputting, to the self-checkout station, price information generated by the POS controller in response to the signals outputted in the outputting step.

44. (New) The method of claim 43 further comprising the steps of:

accessing at least one of stored weight or volume data for each item in the set of desired items;

calculating at least one of the expected total weight or volume for the set of desired items based on inputted data;

automatically measuring at least one of the actual total weight or volume of the set of desired items; and

verifying that the measured total substantially approximates the expected total.

45. (New) The self-checkout station of claim 16 wherein the plurality of data records includes at least one of weight or volume data for each of the plurality of items, and further comprising:

at least one of a weight or volume sensor employed by a shopping cart to measure at least one of the actual weight or volume for the plurality of items placed in the cart; and

a controller for automatically comparing the measured weight or volume with an expected weight or volume calculated from the weight or volume data.

46. (New) The self-checkout station of claim 21 wherein the plurality of data records includes at least one of weight or volume data for each of the plurality of items, and further comprising:

at least one of a weight or volume sensor employed by a shopping cart to measure at least one of the actual weight or volume for the plurality of items placed in the cart; and

a controller for automatically comparing the measured weight or volume with an expected weight or volume calculated from the weight or volume data.

47. (New) The customer-operated self-checkout system of claim 25, wherein the self-checkout station further includes:

a first controller to determine price for the selected items; and

an interface with a second controller,

wherein the first controller determines price for the selected items by outputting signals to the second controller via the interface and inputting price information from the second controller via the interface.

48. (New) The customer-operated self-checkout system of claim 47 wherein the second controller is a POS store controller.

49. (New) The customer-operated self-checkout system of claim 47, wherein the stored information includes at least one of weight or volume data for each selected item and further comprising at least one of a weight or volume sensor to measure at least one of the actual weight or volume for the selected items, in order to compare the measured weight or volume with an expected weight or volume calculated from the weight or volume data.

Pending Claims for U.S. Patent Application No. 09/492,668
(As of the February 28, 2003 Amendment)

WHAT IS CLAIMED IS:

- B,
1. (Amended) A method for retail check-out comprising the steps of:
establishing a communication link between (a) a self-checkout station incorporating a customer-operated automated payment-accepting subsystem and (b) a data storage unit in which a plurality of data records are stored, each of the plurality of data records corresponding to a respective one of a plurality of identifiers that was read by a portable data reading unit before the communication link was established;
inputting the plurality of data records from the data storage unit via the communication link established in the establishing step;
determining a price total for a plurality of items corresponding to the plurality of identifiers based on the plurality of data records inputted in the inputting step; and
accepting payment for the plurality of items based on the price total determined in the determining step,
wherein the step of accepting payment is performed using the customer-operated automated payment-accepting subsystem.
 2. The method of claim 1, wherein the data storage unit is contained in the portable data reading unit.
 3. The method of claim 1, wherein the data storage unit receives data from the portable data reading unit via an RF interface.
 4. (Amended) The method of claim 1, wherein the step of determining the price total comprises the steps of:
outputting signals from the self-checkout station to a POS controller through an interface that formats the signals to mimic signals outputted by conventional POS scanning terminals after performing a check-out scan for each of the plurality of items; and
inputting, to the self-checkout station, price information generated by the POS controller in response to the signals outputted in the outputting step.

5. (Amended) The method of claim 1, wherein the portable data reading unit comprises a barcode reader selected from a group consisting of: a flying spot scanner, an optical imaging reader, and a wand reader.

6. The method of claim 1, wherein the portable data reading unit comprises a radio frequency identification tag reader.

7. The method of claim 1, wherein the automated payment-accepting subsystem comprises at least one of a credit card transaction device, a debit card transaction device, and a cash-accepting device.

8. A method of retail shopping, comprising the steps of:
obtaining a portable reading unit;
selecting a set of desired items;
identifying each of the desired items using the portable reading unit during the selecting step;
linking, after completion of the selecting and identifying steps, the portable reading unit to a self-checkout station having a customer-operated automated payment-accepting subsystem;
waiting for a transfer, into the self-checkout station, of data identifying the set of desired items; and
paying for the set of desired items using the customer-operated automated payment-accepting subsystem.

9. The method of claim 8, wherein the data identifying the set of desired items is transferred into the self-checkout station from the portable reading unit.

10. The method of claim 8, wherein the data identifying the set of desired items is transferred into the self-checkout station from a base station that communicates with the portable reading unit.

11. The method of claim 8, wherein the desired items bear barcode symbols, and the step of identifying the desired items comprises reading the barcode symbols using the portable reading unit.

12. The method of claim 8, wherein the automated payment-accepting subsystem comprises at least one of a credit card transaction device, a debit card transaction device, and a cash-accepting device.

13. (Amended) The method of claim 8, wherein the step of linking comprises a step of placing the portable reading unit into a cradle on the self-checkout station.

14. The method of claim 8, wherein the obtaining step is performed in a first location, and the linking step is performed in a second location that is separated from the first location.

15. The method of claim 8, wherein the first location and the second location are separated by at least twenty feet.

16. (Amended) A self-checkout station comprising:
a data input port that inputs a plurality of data records from a portable data storage unit;
a first controller that determines a price for a plurality of items corresponding to the plurality of data records inputted via the data input port; and
a non-portable customer-operated automated payment-acceptor that generates an output signal based on an amount of tendered payment,
wherein at least one of the first controller and the automated payment-acceptor generates an indication when a tendered payment is sufficient to pay the price determined by the first controller.

17. The self-checkout station of claim 16, wherein the data storage unit comprises a portable data reading unit.

18. (Amended) The self-checkout station of claim 17, wherein the portable data reading unit comprises a barcode reader selected from a group consisting of: a flying spot scanner, an optical imaging reader, and a wand reader.

19. The self-checkout station of claim 17, wherein the portable data reading unit comprises a radio frequency identification tag reader.

20. The self-checkout station of claim 16, wherein the data storage unit comprises a base station that communicates with a portable data reading unit.

21. (Amended) A self-checkout station comprising:
a data input port that inputs a plurality of data records from a portable data storage unit;
a first controller that determines a price for a plurality of items corresponding to the plurality of data records inputted via the data input port;
a non-portable customer-operated automated payment-acceptor that generates an output signal based on an amount of tendered payment; and
an interface with a second controller, wherein the first controller determines the price for the plurality of items by outputting signals to the second controller via the interface and inputting price information from the second controller via the interface,
wherein at least one of the first controller and the automated payment-acceptor generates an indication when a tendered payment is sufficient to pay the price determined by the first controller.

22. The self-checkout station of claim 16, wherein the indication generated by the automated payment-acceptor is based on at least one of an amount of cash received and a credit card authorization.

23. The self-checkout station of claim 16, further comprising a cradle, wherein a connection between the data input port and the data storage unit is established by docking a portable data reading unit in the cradle.

24. The self-checkout station of claim 16, wherein the automated payment-acceptor comprises at least one of a credit card transaction device, a debit card transaction device, and a cash-accepting device.

25. A customer-operated checkout system for items bearing identifiers, the system comprising:

a portable terminal including a data reader, a memory, and a data output port; and
a self-checkout station including a data input port and a customer-operated automated
payment-accepting subsystem,

wherein the portable terminal identifies selected items using the data reader, stores
information about the selected items in the memory, and sends the stored information to the
self-checkout station via the data output port, and

wherein the self-checkout station receives the stored information from the portable
terminal via the data input port and accepts payment from the customer for the selected items
using the payment-accepting subsystem.

26. (Amended) The system of claim 25, wherein the identifiers are barcodes, the
data reader identifies the selected items by reading the barcodes, and the data reader
comprises a barcode reader selected from a group consisting of: a flying spot scanner, an
optical imaging reader, and a wand reader.

27. The system of claim 25, wherein the identifiers are optical characters, and the
data reader identifies the selected items by reading the optical characters.

28. The system of claim 25, wherein the identifiers are radio frequency
identification tags, and the data reader identifies the selected items by reading the radio
frequency identification tags.

29. The system of claim 25, further comprising a base station including a first RF
data interface,

wherein the portable terminal further includes a second RF data interface, and

wherein the portable terminal requests a price from the base station, via the first and
second RF interfaces, corresponding to each identifier read, and the base station provides a
price to the portable terminal, via the first and second RF interfaces, in response to the price
request.

30. The system of claim 25, wherein the memory of the portable terminal stores a
price look-up table, and wherein total price for selected items is computed based on the price
look-up table.

31. The system of claim 25, wherein the self-checkout station further includes an interface to a point-of-sale system.

32. The system of claim 25, wherein the payment-accepting subsystem comprises at least one of a credit card transaction device, a debit card transaction device, and a cash-accepting device.

33. (Amended) A customer-operated self-checkout system for items bearing identifiers, the system comprising:

a portable terminal including a data reader and a first RF interface, wherein the portable terminal identifies selected items using the data reader, and transmits information about the selected items via the first RF interface;

a base station including a second RF interface, a memory, and a data output port, wherein the base station receives the information about the selected items from the portable terminal via the second RF interface, stores the information in the memory, and outputs the information via the data output port; and

a self-checkout station including a data input port and a customer-operated automated payment-accepting subsystem, wherein the self-checkout station receives the stored information from the base station data output port via the data input port, and accepts payment from the customer for the selected items using the payment-accepting subsystem.

34. (Amended) The system of claim 33, wherein the data reader identifies the selected items by reading barcodes, and the data reader comprises a barcode reader selected from a group consisting of: a flying spot scanner, an optical imaging reader, and a wand reader.

35. The system of claim 33, wherein the data reader identifies the selected items by reading optical characters, and the data reader comprises an optical character recognition reader.

36. The system of claim 33, wherein the data reader identifies the selected items by reading radio frequency identification tags, and the data reader comprises a radio frequency identification tag reader.

37. (Amended) The system of claim 33, wherein the base station memory stores a price look-up table, and wherein a total price for selected items is computed based on a price look-up table.

38. The system of claim 33, wherein the self-checkout station further includes an interface to a point-of-sale system.

39. The system of claim 33, wherein the payment-accepting subsystem comprises at least one of a credit card transaction device, a debit card transaction device, and a cash-accepting device.

40. (New) The method of claim 4, wherein the plurality of data records includes physical characteristic data for each of the plurality of items, and further comprising the steps of:

calculating an expected aggregate physical characteristic for the plurality of items based on the plurality of data records;

automatically measuring an actual aggregate physical characteristic for the plurality of items; and

verifying that the measured aggregate substantially equates with the expected aggregate.

41. (New) The method of claim 40 wherein the physical characteristic is weight.

42. (New) The method of claim 40 wherein the physical characteristic is volume.

43. (New) The method of claim 8 further comprising the step of determining a price total at the self-checkout station by:

outputting signals from the self-checkout station to a POS controller through an interface that formats the signals to mimic signals outputted by conventional POS scanning terminals after performing a check-out scan for each of the plurality of items; and

inputting, to the self-checkout station, price information generated by the POS controller in response to the signals outputted in the outputting step.

44. (New) The method of claim 43 further comprising the steps of:

accessing at least one of stored weight or volume data for each item in the set of desired items;

calculating at least one of the expected total weight or volume for the set of desired items based on inputted data;

automatically measuring at least one of the actual total weight or volume of the set of desired items; and

verifying that the measured total substantially approximates the expected total.

45. (New) The self-checkout station of claim 16 wherein the plurality of data records includes at least one of weight or volume data for each of the plurality of items, and further comprising:

at least one of a weight or volume sensor employed by a shopping cart to measure at least one of the actual weight or volume for the plurality of items placed in the cart; and

a controller for automatically comparing the measured weight or volume with an expected weight or volume calculated from the weight or volume data.

46. (New) The self-checkout station of claim 21 wherein the plurality of data records includes at least one of weight or volume data for each of the plurality of items, and further comprising:

at least one of a weight or volume sensor employed by a shopping cart to measure at least one of the actual weight or volume for the plurality of items placed in the cart; and

a controller for automatically comparing the measured weight or volume with an expected weight or volume calculated from the weight or volume data.

47. (New) The customer-operated self-checkout system of claim 25, wherein the self-checkout station further includes:

a first controller to determine price for the selected items; and

an interface with a second controller,

wherein the first controller determines price for the selected items by outputting signals to the second controller via the interface and inputting price information from the second controller via the interface.

48. (New) The customer-operated self-checkout system of claim 47 wherein the second controller is a POS store controller.

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49. (New) The customer-operated self-checkout system of claim 47, wherein the stored information includes at least one of weight or volume data for each selected item and further comprising at least one of a weight or volume sensor to measure at least one of the actual weight or volume for the selected items, in order to compare the measured weight or volume with an expected weight or volume calculated from the weight or volume data.
